I claim:

1. A process for the recovery of hydrogen from a gaseous feedstream containing hydrogen and non-hydrogen components including methane and higher hydrocarbons and, optionally, hydrogen sulfide, said gaseous feedstream being derived from the off gases of a hydroprocessor located in a refinery facility, the process comprising:

a. admitting the gaseous feedstream into the bottom of a stripping column;

b. contacting the gaseous feedstream with at least one sampling device and obtaining a sample of the feedstream for analysis;

c. analyzing the sample to determine the composition of the hydrogen-containing gaseous feedstream;

d. passing the gaseous feedstream in counter-current flow in the column to contact a liquid absorbent stream comprised of at least one predetermined refinery solvent that absorbs the non-hydrogen components and not the hydrogen, said refinery solvent originating in the refinery facility;

and

e. controlling the flow rate of the at least one liquid absorbent refinery solvent in response to the determination of the composition of the hydrogen-containing gas stream to maximize the hydrogen content of the gas stream exiting the stripping column.

2. The process of claim 1, wherein the analysis of the hydrogen-containing gaseous feedstream includes admitting a sample of the gas stream from the at least one sampling device into a hydrocarbon analyzer for analysis and producing the resulting analytical data in digital form.

3. The process of claim 2 which further includes the step of communicating the digital analytical data to a programmed processor and associated controller.

4. The process of claim 3, wherein the controller is operably connected to valve control means which control the selection and flow rate of the at least one refinery solvent into the stripping column, whereby the adsorption of non-hydrogen components by the refinery solvent is maximized.

5. The process of claim 1, wherein the at least one sampling device is a probe, and the analysis includes withdrawing a gaseous sample of the feedstream upstream of the position in the stripping column where the one or more refinery solvents enter the column.

6. The process of claim 5 which includes the step of withdrawing a sample for analysis from at least one position in the stripping column downstream of the position in the column where the one or more refinery solvents enter the column.

7. The process of claim 1, wherein the flow rate of the at least one refinery solvent is controlled by a programmed general purpose computer, the computer including a memory device, the process further comprising storing in the memory device the physical characteristics of the at least one refinery solvents, the physical characteristics including the solubility of the non-hydrogen components under a range of stripping column design operating conditions.

8. The process of claim 1, wherein the stripping column is operated at a temperature in the range of -30°F to 70°F.

9. The process of claim 8, which includes introducing the one or more refinery solvents into the stripping column at a temperature in the range of -30°F to 70°F.

10. The process of claim 1 which further includes introducing the hydroprocessor off gases into a volume of the refinery solvent at the bottom of the stripping column and agitating the mixture to thereby enhance the mass transport of the non-hydrogen components into the refinery solvent.

11. A process for the recovery of hydrogen from a gaseous feedstream containing hydrogen and non-hydrogen components including methane and higher hydrocarbons and, optionally, hydrogen sulfide, said gaseous feedstream being derived from the off gases of a hydroprocessor located in a refinery facility, the process comprising:

a. determining the relative proportions and composition of the hydrogen and the non-hydrogen components of the gaseous feedstream;

b. identifying and rating the available refinery solvents produced in the refining facility for their capacity to absorb hydrogen and the non-hydrogen components of the feedstream;

c. selecting from the available refinery solvents one or more refinery solvents for use in a stripping column operated at predetermined conditions of temperature and pressure to maximize the adsorption of non-hydrogen components from the gaseous feedstream in said stripping column ;

d. admitting the gaseous feedstream into the bottom of a stripping column provided with at least one sampling device;

e. passing the gaseous feedstream in counter-current flow to contact with a liquid absorbent steam consisting of the one or more refinery solvents selected in step (c);

f. periodically analyzing the content of the gaseous feedstream in the stripping column to determine the relative proportions and composition of the hydrogen and the non-hydrogen components; and

g. making any change necessary to the selection and flow rates of the one or more refinery solvents entering the stripping column to thereby maximize adsorption of the non-hydrogen components from the feedstream in the stripping column.

12. The process of claim 11, wherein the determination of the relative proportion and composition of the non-hydrogen component of the feedstream includes admitting a sample of the gas stream from the sampling device into a hydrocarbon analyzer for analysis and generating the resulting analytical data in digital form.

13. The process of claim 12 which further includes the step of transmitting the digital analytical data to a programmed processor and associated controller.

14. The process of claim 13, wherein the controller is operably connected to valve control means which control the selection and flow rate of the one or more refinery solvents into the stripping column, whereby the adsorption of non-hydrogen components by the refinery solvent is maximized.

15. The method of claim 14 which further includes the steps of measuring the operating pressure and temperature of the stripping column and transmitting this data to the processor.

16. The method of claim 11 in which the hydrogen concentration in the stripping column off gas stream is in the range of 85% to 98% mol volume.

17. The process of claim 11, wherein the refinery solvent fed to the stripping column is selected from the group consisting of compounds of butane, pentane, hexane, heptane,

iso-octane, n-octane, methylcyclohexane, 1,2,4-trimethylbenzene, iso-paraffins, gasoline, and mixtures thereof.

18. The process of 17, wherein the refinery solvent is a mixture of iso-octane and methylcyclohexane.

19. The process of claim 11 which includes operating the stripping column at a temperature in the range of -30°F to 70°F.

20. The process of claim 11, wherein a fresh stream of the one or more refinery solvents is introduced in the stripping column.